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LEAD-BASED PAINT POISONING LIABILITY: WISCONSIN REALTORS, RESIDENTIAL PROPERTY SELLERS, AND LANDLORDS BEWARE

I. INTRODUCTION

Lead has been used almost universally throughout civilizations,¹ dating back to at least 3500 B.C.² It has been smelted in Southwest Asia and Europe since 2500 B.C., and artifacts containing the metal have been found during excavations of the city of Troy, which was destroyed in approximately 1200 B.C.³ Lead also was used in the structure of the Hanging Gardens of Babylon⁴ and in ancient Egyptian cosmetics and ornaments.⁵ However, lead gained preeminence when the Romans began using it in household items, such as storage containers⁶ and drinking goblets,⁷ and devised an elaborate water-carrying system with lead pipes.⁸

The dangers of lead also have been recognized since ancient times. As early as the second century B.C., the Greek poet-physician Nicander described classical signs and symptoms of lead poisoning in persons who ingested lead.⁹ However, despite the awareness of lead's harmful effects, its use has continued. Even in the United States, the risks of lead have been periodically rediscovered—and periodically ignored. In fact, lead's toxic properties were highlighted in Benjamin Franklin's now famous 1786 letter on lead poisoning,¹⁰ in which he lamented over "the mischie-

1. S. REP. NO. 152, 103d Cong., 1st Sess. 1 (1993), available in 1993 WL 405909.

2. Jane S. Lin-Fu, *Lead Poisoning and Undue Lead Exposure in Children: History and Current Status*, in *LOW LEVEL LEAD EXPOSURE: THE CLINICAL IMPLICATIONS OF CURRENT RESEARCH* 5, 5 (Herbert L. Needleman ed., 1980).

3. *Id.* at 6.

4. *Id.*

5. S. REP. NO. 152, *supra* note 1, at 1.

6. *Id.* Both the Greeks and the Romans used leaded cookware and used lead as a sweetener and as an enzyme inhibitor to preserve fruits and wines. *Id.*; Lin-Fu, *supra* note 2, at 6.

7. S. REP. NO. 152, *supra* note 1, at 1.

8. Lin-Fu, *supra* note 2, at 6. The Romans are said to have produced more than 60,000 tons of lead each year for 400 years. *Id.*

9. *Id.*; Alexandra Greeley, *Getting the Lead Out . . . of Just About Everything*, 25 *FDA CONSUMER*, July-Aug. 1991, at 26, 27.

10. Letter from Benjamin Franklin to Benjamin Vaughan (July 31, 1786) (distributed by the Philadelphia Department of Public Health, Accident Control Section, Childhood Lead Poisoning Prevention Project); Lin-Fu, *supra* note 2, at 6. The letter press copy of Franklin's communication is in the Library of Congress, the holograph not having survived.

vous Effect from Lead," and wondered "how Long a useful Truth may be known, and exist, before it is generally receiv'd and practis'd on."¹¹

11. The full text of this letter written to Benjamin Vaughan, a close friend of Franklin's, states:

Dear Friend,

Phil^a July 31, 1786

I recollect that when I had the great Pleasure of seeing you at Southampton, now a 12 month since we had some Conversation on the bad Effects of Lead taken inwardly; and that at your Request I promis'd to send you in writing a particular Account of several Facts I then mention'd to you, of which you thought some good use might be made. I now sit down to fulfil that Promise.—

The first Thing I remember of this kind, was a general Discourse in Boston when I was a Boy, of a Complaint from North Carolina against New England Rum, that it poison'd their People, giving them the Dry Bellyach, with a Loss of the Use of their Limbs. The Distilleries being examin'd on the Occasion, it was found that several of them used Leaden Still-heads and Worms, and the Physicians were of Opinion that the Mischief was occasion'd by that Use of Lead. The Legislature of the Massachusetts thereupon pass'd an Act prohibiting under severe Penalties the Use of such Still-heads and Worms thereafter. Inclos'd I send you a Copy of the Act, taken from my printed Law book. In 1724, being in London, I went to work in the Printing-House of Mr. Palmer, Bartholomew Close as a Compositor. I there found a Practice I had never seen before, of drying a Case of Types, (which are wet in Distribution) by placing it sloping before the Fire. I found this had the additional Advantage, when the Types were not only dry'd but heated, of being comfortable to the Hands working over them in cold weather. I therefore sometimes heated by Case when the Types did not want drying. But an old Workman observing it, advis'd me not to do so, telling me I might lose the Use of my Hands by it, as two of our Companions had nearly done, one of whom that us'd to earn his Guinea a Week could not then make more than ten Shillings and the other, who had the Dangles, but Seven & sixpence. This, with a kind of obscure Pain that I had sometimes felt as it were in the Bones of my Hand when working over the Types made very hot, induc'd me to omit the Practice. But talking afterwards with Mr. James, a Letter-founder in the same Close, and asking him if his People, who work'd over the little Furnaces of melted Metal, were not subject to that Disorder; he made Light of any Danger from the Effluvia, but ascrib'd it to Particles of the Metal swallow'd with their Food by slovenly Workmen, who went to their Meals after handling the Metal, without well-washing their Fingers, so that some of the metaline Particles were taken off by their Bread and eaten with it. This appear'd to have some Reason in it. But the Pain I had experienc'd made me still afraid of those Effluvia.

Being in Derbyshire at some of the Furnaces for Smelting of Lead Ore, I was told that the Smoke of those Furnaces was pernicious to the neighboring Grass and other Vegetables. But I do not recollect to have heard any thing of the Effect of such Vegetables eaten by Animals. It may be well to make the Enquire.—

In America I have often observ'd that on the Roofs of our shingles Houses where Moss is apt to grow in northern Exposures, if there be any thing on the Roof painted with white lead, such as Balusters, or Frames of dormant Windows, sc. there is constantly a streak on the Shingles from such Paint down to the Eaves, on which no Moss will grow, but the Wood remains constantly clean and free from it.—We seldom drink Rain Water that falls on our Houses; and if we did, perhaps the small Quantity of Lead descending from such Paint, might not be sufficient to produce any sensible ill Effect on our Bodies. But I have been told of a Case in Europe, I forgot the Place, where a whole Family was afflicted with what we call the Dry-Bellyach, or Colica Pictorum, by drinking Rain

Unfortunately, the "Truths" of lead's poisonous potential would not be "receiv'd and practic'd on" for nearly two hundred years after Franklin's letter. Lead continued to be used in a multitude of products, including lead-pigmented paint. This particular use has been the primary contributor to the current lead poisoning problem, even though lead was nationally banned in paints manufactured for interior use in 1928.¹² By then lead had already left its poisonous legacy.

One aspect of this legacy—the childhood lead-based paint poisoning epidemic—has led to massive litigation. It has produced a huge number of cases with sympathetic plaintiffs, created the potential for substantial damages,¹³ and played a role in developing novel causes of action.¹⁴

Water. It was at a Country Seat, which being situated too high to have the Advantage of a Well, was supply'd with Water from a Tank which receiv'd the Water from the Leaded Roofs. This had been drank several Years without Mischief; but some young Trees planted near the House, growing up above the Roof, and shedding their Leaves upon it, it was suppos'd that an Acid in those Leaves had corroded the Lead they cover'd, and furnish'd the Water of that Year with its beneficial Particles & Qualities. When I was in Paris with Sir John Pringle in 1767, he visited La Charite, a Hospital particularly famous for the Cure of that Malady, and brought from thence a Pamphlet, containing a List of the Names of Persons, specifying their Professions or Trades, who had been cured there. I had the Curiosity to examine that List, and found that all the Patients were of Trades that some way or other use or work in Lead; such as Plumbers, Glasiers, Painters, sc. excepting only two kinds, Stonecutters and Soldiers. These I could not reconcile to the Notion that Lead was the Cause of that Disorder. But on my mentioning this Difficulty to a Physician of that Hospital, he inform'd me that the Stonecutters are continually using melted Lead to fix the End of Iron Balustrades in Stone; and that the Soldiers had been employ'd by Painters—Labourers in Grinding of Colours.

This, my dear Friend, is all I can at present recollect on the Subject. You will see by it, that the Opinion of this mischievous Effect from Lead, is at Least above Sixty Years old; and you will observe with Concern how Long a useful Truth may be known, and exist, before it is generally reciev'd and practis'd on. - I am, every,

Yours most affectionately

B. Franklin

12. Curtis Rist, *Laying Siege to Lead Poisoning*, *NEWSDAY* (New York), May 14, 1991, at 61. The use of lead-based interior paint was banned in New York City in 1960. *Id.*

13. For examples of damage awards and settlement amounts, see *Hardy v. Griffin*, 569 A.2d 49 (Conn. App. Ct. 1989) (\$928,626 award for child one and \$100,000 award for child two, plus medicals); *Davis v. Royal-Globe Ins. Cos.*, 223 So. 2d 912 (La. Ct. App. 1969) (\$115,000 award for child one and \$2,500 award for child two); *Richwind Joint Venture 4 v. Brunson*, 625 A.2d 326 (Md. Ct. Spec. App. 1993) (\$252,000 award for child one and \$247,500 award for child two); *Christopher v. Duffy*, 556 N.E.2d 121 (Mass. App. Ct. 1990) (\$52,000 settlement); *Sawchyn v. Westerhaus*, 593 N.E.2d 420 (Ohio Ct. App. 1991) (\$246,000 award); *Norwood v. Lazarus*, 634 S.W.2d 584 (Mo. Ct. App. 1982) (\$9,350 award); *Whitelaw v. Nowicki*, No. 474-326 (Milwaukee County Cir. Ct. filed Sept. 30, 1981) (\$1,300,00 settlement); *Franklin v. Vallee*, No. 90-CV-1129 (Racine County 1989) (\$1,656,205 settlement).

14. See, e.g., *LeBlanc v. Sherwin Williams Co.*, 551 N.E.2d 30 (Mass. 1990) (alleging product liability, breach of warranty, and market share liability theories against paint manufac-

This Comment focuses on the nature of residential lead-based paint poisoning, especially in Wisconsin, and discusses several potential bases on which real estate brokers, sellers, and landlords may face liability for such poisoning. Part II provides population estimates of childhood lead poisoning. Part III details the sources of lead poisoning, pathways of exposure, methods of screening and diagnosis, and the medical sequelae of lead poisoning. Finally, Parts IV and V describe and analyze causes of action that may be brought under Wisconsin and federal law.

II. POPULATION ESTIMATES OF CHILDHOOD LEAD POISONING

A. National Estimates

As a result of a congressional directive, the Agency for Toxic Substances and Disease Registry (ATSDR) issued a landmark report in 1988 on childhood lead poisoning.¹⁵ The ATSDR report provides a comprehensive summary of the adverse health effects of lead on children, as well as estimates of the number of children (six months to five years old) at risk from lead exposure. Using a blood-lead level of fifteen micrograms per deciliter (15 $\mu\text{g/dL}$) as the maximum acceptable lead level, the ATSDR estimated that approximately 2.4 million children in U.S. standard metropolitan statistical areas (SMSAs), or about 17% of all such children, are at risk of adverse health effects from lead expo-

turer); *Garcia v. Jimenez*, 539 N.E.2d 1356 (Ill. App. Ct. 1989) (alleging lead as a "dangerous instrumentality"); *Philadelphia v. Lead Indus. Ass'n, Inc.*, No. 90-7064JG (E.D. Pa. filed Nov. 5, 1990) (alleging market share liability theory against paint manufacturer); *Gray v. Stillman White Co.*, 522 A.2d 737 (R.I. 1987) (alleging newborn was lead poisoned via father's sperm, which had allegedly been damaged from lead poisoning caused by father's employment).

15. S. REP. NO. 152, *supra* note 1, at 3 (citing ATSDR, *THE NATURE AND EXTENT OF LEAD POISONING IN CHILDREN IN THE UNITED STATES: A REPORT TO CONGRESS* (1988)). No comparable estimates exist for the total number of adults at risk from lead exposure. However, data does show that adults' occupations often expose them to lead. *Id.* The National Institute for Occupational Safety and Health (NIOSH) has identified 113 occupations that may involve lead exposure. *Id.* at 6. Also, a 1987 study of occupational exposure found over 1000 workers in three states with blood lead levels in excess of 40 $\mu\text{g/dL}$, and 200 of those workers at levels above 50 $\mu\text{g/dL}$. *Id.* For example, the California Department of Health Services received over 3000 reports of adult blood-lead levels in excess of 25 $\mu\text{g/dL}$ (concerning almost 1300 individual adults) during a nine-month period in 1987. *Id.*

About 1% of all reports showed blood-lead levels in excess of 80 $\mu\text{g/dL}$, 7% in excess of 50 $\mu\text{g/dL}$, and 21% in excess of 40 $\mu\text{g/dL}$. *Id.* Workers in lead smelting, battery manufacturing, and brass foundries accounted for nearly 80% of reports. *Id.* Individuals in radiator repair, pottery and ceramics manufacturing, and gun firing ranges accounted for the remainder of those poisoned annually. *Id.*

sure.¹⁶ If other racial categories and children outside the delineated SMSAs are included, as many as three to four million children in this age group may be at risk.¹⁷

Many groups of children, such as black, inner-city, and lower-income children, have significantly higher percentages of blood-lead levels exceeding threshold levels of concern. Although the ATSDR report did not estimate the number of children at risk in specific urban areas, a 1990 report issued by the Environmental Defense Fund (EDF) included such estimates and found substantial differences in exposures of children from different racial, economic,¹⁸ and residential location groups.¹⁹

16. *Id.* at 5. The ATSDR also has estimated that during any given year, approximately 400,000 fetuses are at risk of adverse health effects due to exposure to maternal blood-lead levels greater than 10 µg/dL. *Id.*

17. *Id.*: Using a greater exposure level of 20 µg/dL, about 200,000 children are at risk. *Id.* The EPA estimates that 15% of the children in the United States have elevated blood-lead levels—i.e., levels above 10 µg/dL. Deb Martin, *Lead Cleanup in the Midwest*, EPA J., Mar.-Apr. 1992, at 56. Furthermore, the U.S. Public Health Service has said that poor minority children in inner cities, who are already disadvantaged by inadequate nutrition and other factors, are particularly vulnerable to lead poisoning. S. REP. NO. 152, *supra* note 1, at 5. But, these dangers are not confined to poor children. Rist, *supra* note 12, at 61. Renovations of houses and apartments built before 1960 can raise lead-tainted dust and may present one of the most virulent health problems for children. *Id.*; Steven Waldman, *Lead and Your Kids*, NEWSWEEK, July 15, 1991, at 43; see also *infra* note 57 and accompanying text.

The 1991 redefining of the blood-lead level limit constituting lead poisoning and the recently outlined \$42 million federal lead abatement program for fiscal year 1992 could result in an immediate 10- to 15-fold increase in the numbers of children across the nation who are considered to have elevated and unsafe levels of lead in their bodies. Rist, *supra* note 12, at 61; see also Cheryl Laird, *Lead Called Serious Threat to Children: Guidelines Lower Danger Threshold*, HOUSTON CHRON., Oct. 8, 1991, at 1; Ann Mariano, *U.S. Criticized on Lead Removal Efforts; Issue Centers on Law Charging HUD with Program Responsibility*, WASHINGTON POST, May 4, 1991, at F1.

18. Lead poisoning disproportionately affects poor children and minorities. Jane Perkins, *Recognizing and Attacking Environmental Racism*, 26 CLEARINGHOUSE REV. 389, 393 (1992) [hereinafter Perkins, *Environmental Racism*]. According to the Centers for Disease Control (CDC), "Lead exposure is at once a by-product of poverty and a contributor to the cycle that perpetuates and deepens the state of being poor." CDC, PREVENTING LEAD POISONING IN YOUNG CHILDREN 12 (1991).

Because of this increased risk, federal laws now guarantee that poor children are tested for lead poisoning. Perkins, *Environmental Racism*, at 394; Perkins, *Lead Poisoning Problems Challenged on Many Fronts*, 25 CLEARINGHOUSE REV. 13, 14-15 (1991) [hereinafter Perkins, *Lead Poisoning*]. For example, in addition to covering children who receive AFDC, Medicaid covers all children below age six with family incomes below 133% of the federal poverty level. Perkins, *Environmental Racism*, at 397 n.85; see also *infra* note 71 and accompanying text.

19. For example, black children living below the poverty level (\$6000) in central cities of large metropolitan areas may have a greater than 95% chance of having blood-lead levels that exceed 10 µg/dL, and about a 67% chance of having blood-lead levels that exceed 15 µg/dL. S. REP. NO. 152, *supra* note 1, at 5. Public housing is particularly problematic. It is estimated that more than 1.7 million children live in public housing units that contain lead-based paint.

Based on geographic location, higher lead exposures are found in areas, such as the Northeast and Midwest, that have older housing stock.²⁰ For example, the EDF estimates that almost 75% of the children in New York City have blood-lead levels exceeding ten µg/dL, and over 33% have levels of fifteen µg/dL.²¹ However, areas with newer housing stock are not immune from lead poisoning. For example, the EDF estimates that Las Vegas, a rapidly growing area with a large amount of relatively new housing, still has almost twelve thousand children (or over 28% of the area's children) with blood-lead levels exceeding ten µg/dL.²²

B. Lead Poisoning in Wisconsin

Although Chapter 151 of the Wisconsin Statutes requires physicians to report all confirmed or suspected blood-lead poisonings and lead exposures,²³ the precise number of Wisconsin children with lead poisoning

Perkins, *Environmental Racism*, *supra* note 18, at 395 (citing HUD, COMPREHENSIVE AND WORKABLE PLAN FOR THE ABATEMENT OF LEAD-BASED PAINT IN PRIVATELY OWNED HOUSING (Dec. 1990)).

The ATSDR report also shows that white children in the highest family income category (greater than \$150,000) who do not live in the central cities of large urban areas have a greater than one-third chance of having blood-lead levels in excess of 10 µg/dL. S. REP. NO. 152, *supra* note 1, at 5.

20. S. REP. NO. 152, *supra* note 1, at 13.

21. *Id.*

22. *Id.*

23. WIS. STAT. § 151.05, entitled "Reports of lead poisoning or lead exposure," requires that:

Every physician who diagnoses lead poisoning or lead exposure, or any nurse, hospital administrator, director of a clinical laboratory or public health officer who has verified information of the existence of any person found or suspected to have lead poisoning or lead exposure, shall report to the department or to the local health officer of the region in which the person resides within 48 hours after verifying this information. The local health officer shall report to the department the name, address, laboratory results, date of birth and any other information about the person the department deems essential. Any physician, nurse, hospital administrator, director of a clinical laboratory, public health officer or allied health professional making such a report in good faith shall be immune from any civil or criminal liability that otherwise might be incurred from making the report.

Wis. STAT. § 151.05 (1991-92). Subsection 4 of the statute defines "lead poisoning or lead exposure" as "a level of lead in the blood beyond 25 micrograms per 100 milliliters of blood, or the corresponding erythrocyte protoporphyrin level as determined by the department by rule." *Id.* § 151.01(4). Section 151.12 further provides that whenever the Center for Disease Control (CDC) of the federal Department of Health and Human Services specifies a standard for determining lead poisoning that differs from that specified in Wis. STAT. § 151.01(4), the state will adopt the new standard. *Id.* § 151.12. Currently, the CDC has set 10 µg/dL as the lower level of the range at which the effects of blood-lead poisoning are now identifiable. CDC, *supra* note 18, at 2.

is unknown. In compliance with Chapter 151, 3265 children with blood-lead values above twenty $\mu\text{g/dL}$ (the old value set by the Centers for Disease Control (CDC) defining lead poisoning) were reported to the Wisconsin Division of Health from July 1992 to June 1993.²⁴ However, because less than one-third of children in the state at high risk for lead poisoning are annually screened,²⁵ this figure likely understates the true extent of the lead poisoning problem.²⁶ Consequently, the Wisconsin Division of Health has used the national incidence estimate of 17% to establish that approximately thirty-six thousand children in Wisconsin are at high risk for lead poisoning.²⁷

To track the incidence of lead poisoning, the Wisconsin Division of Health initiated a laboratory-based surveillance system for elevated blood-lead levels in 1987. Joseph Schirmer et al., *Childhood Lead Exposure in Wisconsin in 1990*, WIS. MED. J., Jan. 1991, at 31, 33.

24. Joseph Schirmer, Statistical Summary Handout on Wisconsin's Lead Program (1993) (on file with the Wisconsin Division of Public Health). From July 1992 to June 1993, the Wisconsin Lead Program reported 50,117 screenings, of which 3265 children showed blood-lead levels greater than or equal to 20 $\mu\text{g/dL}$. *Id.* The Division also conducted 1611 inspections and 773 abatements. *Id.* In 1989, the Division reported that 880 children had blood-lead levels that exceeded 25 $\mu\text{g/dL}$. Schirmer, *supra* note 23, at 31.

25. Schirmer, *supra* note 23, at 33; see also Jerry Moskal, *Wisconsin Lawmakers Seek Federal Money for Lead Testing*, GANNETT NEWS SERVICE, Apr. 12, 1991.

26. Schirmer, *supra* note 23, at 31. The Environmental Protection Agency currently uses computer modeling to estimate the percentage and number of children who are expected to have elevated blood-lead levels based on a combination of real and estimated contamination levels in air, drinking water, food, soil, and household dust. Martin, *supra* note 17, at 56. Within the six-state midwest region, the ten cities estimated to have the highest numbers of children under age 7 with elevated blood-lead levels are Eau Claire, WI (85%), Milwaukee, WI (20%), Cleveland, OH (15%), Minneapolis, MN (15%), Detroit, MI (14%), Chicago, IL (13%), Cincinnati, OH (13%), St. Paul, MN (13%), Toledo, OH (12%), and Indianapolis, IN (7%). *Id.*

Children with Elevated Blood Levels

	%	Children (All Groups <7 y.o.)	African American Children <7 y.o.	Hispanic Children <7 y.o.
Chicago, IL	13	40,370	18,712	7,888
Detroit, MI	14	19,142	12,409	555
Milwaukee, WI	20	13,878	4,225	781
St. Paul, MN	13	12,152	785	138
Cleveland, OH	15	9,396	4,022	360
Cincinnati, OH	13	5,415	1,939	41
Indianapolis, IN	7	5,223	1,740	52
Minneapolis, MN	15	4,611	379	59
Toledo, OH	12	4,515	1,157	182
Eau Claire, WI	85	3,650	8	13

Id.

27. Schirmer, *supra* note 23, at 31. Another researcher has determined that 75,000 Wisconsin children are at risk of lead poisoning. CAROLINE HOFFMAN, REPORT OF THE CHILDHOOD LEAD POISONING PREVENTION STUDY COMMITTEE SPONSORED BY THE WISCONSIN

The number of children detected with elevated blood-lead levels, as compared with the total number of children screened for lead poisoning, further indicates the extent of the lead poisoning problem in Wisconsin.²⁸ Wisconsin's Medical Assistance Program (also known as HealthCheck or the Title XIX program) requires blood-lead screening as part of its preventive health checkup program for all enrolled children at ages twelve months and twenty-four months, and for enrolled children at risk between the ages of twenty-four months and seventy-two months.²⁹ Data from HealthCheck show that 12,435 children were screened under the Wisconsin Medicaid program in 1992.³⁰ Excluding those screened in the city of Milwaukee, 2644 children had blood-lead levels greater than or equal to ten $\mu\text{g/dL}$. However, this number also likely underestimates the number of children with blood-lead levels greater than or equal to ten $\mu\text{g/dL}$ because some counties have responded more aggressively than others in providing HealthCheck services under the Medical Assistance Program.³¹

COUNCIL ON DEVELOPMENTAL DISABILITIES AND MARCH OF DIMES BIRTH DEFECTS FOUNDATION 6 (1993). *Id.* The researcher based this on census data showing that 443,000 children under age 7 living in Wisconsin, and on a U.S. Agency for Toxic Substances and Disease Registry (ATSDR) estimate that 17% of all U.S. children have blood lead levels of at least 15 $\mu\text{g/dL}$. *Id.*

28. HOFFMAN, *supra* note 27, at 7.

29. *Id.*

30. *Id.* This does not include children in Milwaukee, Dane, and Eau Claire Counties who participated in the Medical Assistance Program through HMO programs. *Id.* In 1992, the Department of Health and Social Services (DHSS) estimated that 40,000 Wisconsin children (or 9% of all Wisconsin children) under age 7 were screened for lead poisoning. *Id.* However, DHSS does not receive complete data on the number of children screened for lead poisoning. *Id.*

31. *Id.* at 7-8. Under similar circumstances in California, a lead poisoning prevention advocacy group pressed the lack of compliance with Medicaid-required testing by filing a federal class action lawsuit. Perkins, *Environmental Racism*, *supra* note 18, at 397 (citing *Matthews v. Coye*, No. C-90-3620 EFL (N.D. Cal. settled Oct. 1991)). The California Department of Health Services allegedly violated the Medicaid Act and HCFA guidelines when it gave Medicaid-participating physicians discretion in deciding whether to conduct lead blood tests. *Id.* In 1989, fewer than 300 of the more than 500,000 eligible children had been tested. *Id.* In Los Angeles County, the county with the greatest concentration of blacks, only 2 blacks were tested that year. *Id.* The suit was settled in October 1991 when the Department agreed that the HCFA guidelines mandated testing. *Id.*

C. *City of Milwaukee Health Department Statistics*

Milwaukee is an economically³² and racially³³ segregated city with extremely old housing stock.³⁴ The city has a total population of 628,202 persons,³⁵ and approximately 64,000 persons, or roughly 10 percent, are under age 6.³⁶ Half of these children live in the central city, where a significant portion of the lead-containing housing is deteriorating,³⁷ resulting in an estimated 19,000 children at high risk for lead poisoning.³⁸ Additionally, statistical summaries prepared by the Milwaukee Health Department Lead Poisoning Prevention Program show that the city had 380 new cases of lead poisoning in 1990, 608 new cases in 1991, and 800 new cases in 1992.³⁹

32. Amy Murphy, Summary of the Milwaukee Health Department Childhood Lead Poisoning Prevention Program 1 (1993) (available from the City of Milwaukee, WI). Since 1980, the number of families that own the housing units in which they live has declined. *Id.* Also, the number of homeowners who occupy inner-city dwellings has declined. *Id.* In the central city, where the majority of Milwaukee's minority community live, the average contract rent is \$285, which is significantly below the city median of \$342. *Id.*

33. *Id.* Ninety-seven percent of Milwaukee's blacks live within the city limits. *Id.* Although some blacks live in integrated areas, the majority continue to live in predominantly black neighborhoods. *Id.*

34. *Id.* Based on 1990 census data and property tax files, 52.4% of all housing units were built before 1940, 77% before 1959, and 96.8% before 1979. *Id.* Based on 1990 figures obtained by the Metropolitan Milwaukee Association of Commerce, the Milwaukee metropolitan area has 562,031 housing units. Metropolitan Milwaukee Association of Commerce, METRO MILWAUKEE ECONOMIC FACT BOOK 2 (1993). Of 537,722 occupied units, 59% were owner occupied and 41% renter occupied. *Id.* The median value of owner occupied housing units was \$77,300 in 1990. The median contract rent for renter occupied units was \$378. *Id.*

35. Murphy, *supra* note 32, at 2.

36. *Id.*

37. *Id.* Approximately 68,000 of the 87,000 housing units in Milwaukee's central city have existing lead hazards. *Id.*

38. *Id.* Of the estimated 36,000 children at risk for lead poisoning in Wisconsin's 14 major urban areas, half live in Milwaukee. *Id.*

39. *Id.* In Wisconsin, local government provides most of the initiative and funding for lead poisoning prevention programs. Schirmer, *supra* note 23, at 33. The Milwaukee Health Department (MHD) is especially committed to identifying, evaluating, and controlling environmental lead hazards. *Id.* at 23. In fact, the MHD pioneered outpatient lead treatment protocols in the 1970s and currently is developing new lead abatement procedures. *Id.* In 1989, more than 9000 screening tests were conducted on Milwaukee children (these constituted more than 80% of all screening tests conducted last year in Wisconsin). *Id.* MHD also inspected 938 housing units and conducted more than 2600 home visits. *Id.* The total estimated operating cost for this program in 1989 was \$416,000. *Id.*

In 1989, the Milwaukee Health Department (MHD) also issued repair orders for 492 residences. Don Behm, *City Losing Lead-Poisoning Fight*, MILWAUKEE J., Sept. 23, 1990, at 1, 8. Through September 1, 1990, MHD had issued an additional 426 clean-up orders. *Id.*

III. MEDICAL ASPECTS OF LEAD POISONING

A. Sources of Lead Poisoning

Lead is naturally present within the earth's crust and lasts forever once introduced into the environment.⁴⁰ It does not dissipate, biodegrade, or decay. Rather, it is dispersed from its original application into the air,⁴¹ water,⁴² soil,⁴³ and dust.⁴⁴ In fact, lead-contaminated dusts and soils remain two of the primary sources of lead exposure for children.⁴⁵

Once extracted from its natural ore state, lead has thousands of applications.⁴⁶ For example, lead has been used in gasoline, water pipes, houseware decorations,⁴⁷ pottery glazes,⁴⁸ lead crystal ware, power plant

40. Greeley, *supra* note 9, at 29. Most environmental lead exposure today is a result of past uses of lead. *Id.*; Waldman, *supra* note 17, at 43-44.

41. R.M. HARRISON & D.P.H. LAXEN, LEAD POLLUTION: CAUSES AND CONTROL 70-103 (1981).

42. HARRISON & LAXEN, *supra* note 41, at 31-53; Kenneth M. Reiss, *Federal Regulation of Lead in Drinking Water*, 11 VA. ENVTL. L.J. 285 (1991-92); Anthony J. Bellia, Jr., Note, *Lead Poisoning in Children: A Proposed Legislative Solution to Municipal Liability for Furnishing Lead-Contaminated Water*, 68 NOTRE DAME L. REV. 399 (1992); Waldman, *supra* note 17, at 47. For information on cities with lead levels exceeding Environmental Protection Agency standards, see *Cities with Lead Levels Over EPA Standards*, USA TODAY, Oct. 21, 1992, at 13A.

43. CDC, *supra* note 18, at 19; HARRISON & LAXEN, *supra* note 41, at 55-68. For example, although lead emissions from gasoline have largely been eliminated, an estimated four to five million metric tons of lead used in gasoline remain in dust and soil. CDC, *supra* note 18, at 19. Lead generally remains in the upper two to five centimeters of undisturbed soil. *Id.* at 20. Urban soils and other soils that are disturbed or turned under may be contaminated to greater depths. *Id.* Soil lead levels within 25 meters of roadways are usually 30 to 2000 parts per million (ppm) higher than natural soil lead levels, and some roadside soils have concentrations as high as 10,000 ppm. *Id.* Soils adjacent to houses painted with exterior lead paints may have lead levels that exceed 10,000 ppm, and soil lead levels adjacent to smelters may be as high as 60,000 ppm. *Id.*

44. CDC, *supra* note 18, at 20. In addition, children are continually exposed to lead through parents' occupations and hobbies. *Id.* at 4.

45. *Id.* As a general rule, blood-lead levels generally rise 3 to 7 µg/dL for every 1000 ppm increase in soil or dust lead concentrations. *Id.* at 20.

46. *Id.*; see also Leon Jaroff, *Controlling a Childhood Menace: Lead Poisoning Poses the Biggest Environmental Threat to the Young*, TIME, Feb. 25, 1991, at 68; Waldman, *supra* note 17, at 42-48; HARRISON & LAXEN, *supra* note 41, at 159-64.

47. Greeley, *supra* note 9, at 26. Limits have been placed on the amount of lead that may leach from ceramic products and silver-plated hollowware. *Id.* The FDA continues to monitor food for lower levels of lead and to evaluate potential sources of dietary lead, such as ceramic ware, decorated glassware, calcium supplements, lead-containing wine bottle seals, some older commercial coffee urns, and food ingredients. *Id.*

48. *Id.* Imported ceramic products have been a greater concern than those produced in the United States because most violations of FDA standards have been by foreign sources. *Id.*

scrubbers, lead-acid batteries, solder,⁴⁹ and paint. Lead-based paint remains the most common source of high-dose lead poisoning for pre-school children in the United States.⁵⁰

Although, in 1978, the Consumer Products Safety Commission (CPSC) placed restrictions⁵¹ on the lead content of residential paint,⁵² millions of houses still contain old leaded paint,⁵³ either in an undercoat or in the most current coat of paint. Typically, it is found on kitchen and bathroom walls, doors, windows, and wooden trim of houses built before 1950.⁵⁴ The risks of lead poisoning are greatest when the paint itself or the underlying surface has begun to deteriorate and when the paint, although intact, is located on surfaces accessible to children.⁵⁵ Many cases of childhood lead poisoning also have resulted from lead dust released during home renovation or remodeling.⁵⁶

B. Pathways of Exposure

Lead enters the body through three routes: inhalation, ingestion, and absorption through the skin. In children, the two most common routes are inhalation and absorption. The amount of lead inhaled depends on

49. *Id.* The replacement of lead solder in food cans has significantly reduced the amount of lead ingested by the average American. *Id.* In 1979, about 90% of all American-produced food cans contained lead solder, and in 1990 about 3.9% of such cans contained lead. *Id.* Since 1991, the production of lead-soldered food cans has been banned in the United States. *Id.*

50. CDC, *supra* note 18, at 18.

51. *Id.* No uniform standard exists for determining safe or allowable amounts of lead in existing painted surfaces. *Id.* at 19. Values generally range from 0.7 to 1.2 mg/cm² of lead when lead content is measured using a portable X-ray fluorescence analyzer or at 0.5% by weight when using laboratory analysis. *Id.* These limits are primarily based on practical, rather than health, considerations. *Id.*

52. In 1978, the CPSC banned the manufacturing of paint containing more than 0.06% lead by weight where the paint would be used for interior and exterior residential surfaces, toys, and furniture. *Id.* at 18. Lead-based paint, however, is still currently used in industrial, military, and marine contexts and occasionally ends up being used in homes. *Id.* Lead paint also continues to be used on the exteriors of painted steel structures, such as bridges and expressways. *Id.* at 19.

53. *Id.* at 12. Paint containing up to 50% was widely used throughout the 1940s. *Id.* at 18.

54. *Id.* at 19. Lead paint on interior and exterior windows is of particular concern because repeated opening and closing of the windows abrades the paint into dust. *Id.*

55. *Id.*

56. *Id.* Before older homes are renovated, they should be tested for the presence of lead-based paint. *Id.* If lead paint is found, renovations should be performed by contractors experienced in working with lead-based paint. *Id.*

particle size and solubility in body fluids.⁵⁷ Roughly 30 to 50% of the amount inhaled is retained in the lungs and absorbed.⁵⁸

Although inhalation is a fairly efficient method of lead exposure, the total amount that is inhaled is usually small compared to the amount that is ingested.⁵⁹ Lead can be ingested through the repeated eating of non-food substances (called pica); however, a child does not have to eat paint chips to become poisoned.⁶⁰ More commonly, young children ingest dust and soil contaminated⁶¹ with lead from paint that flaked or chalked as it aged or had been disturbed during home maintenance or renovation.⁶²

C. Screening and Diagnosis

Because most lead-exposed children do not exhibit obvious symptoms of lead poisoning, laboratory measurement often is the sole means of determining whether exposure has occurred.⁶³ Two methods of screening are commonly used: blood-lead screening and erythrocyte protoporphyrin (EP) screening.⁶⁴ Blood-lead screening is the method of choice for lead poisoning detection because it yields a more specific result.⁶⁵ However, EP screening is frequently used because it costs less, requires only a fingerstick (rather than venipuncture), and yields immediate results.⁶⁶

57. See Thomas Matte, *Childhood Lead Poisoning: Exposure Sources, Toxicology, and Public Health Implications of Recent Research* 3 (1992) (on file with the Wisconsin Department of Toxicology).

58. *Id.*

59. *Id.* Ingestion is much more efficient in children (as high as 50%) than in adults because children tend to ingest more lead-contaminated dust and dirt than adults. *Id.*

60. CDC, *supra* note 18, at 18.

61. Bornschein et al., *Exterior Surface Dust Lead, Interior House Dust Lead and Childhood Lead Exposure in an Urban Environment*, in *TRACE SUBSTANCES IN ENVTL. HEALTH* 322-32 (Hemphill ed., 1986).

62. *Id.*

63. Noel Stanton, *Laboratory Considerations in Lead Poisoning Detection*, at 1 (Sept. 1991) (paper on file with the Wisconsin State Laboratory of Hygiene).

64. *Id.*

65. *Id.*

66. *Id.* Some researchers believe that blood measurements may significantly underestimate the lead stored in a child's body. *Lead Toxicity: Bones Tell the Real Story*, 135 *SCIENCE NEWS* 111, 111 (1989). Because lead migrates to the bone several weeks after entering the bloodstream, a number of scientists favor using a technique that measures the amount of lead in bones and teeth. Greeley, *supra* note 9, at 28.

Several states and cities aggressively screen inner-city children for lead poisoning.⁶⁷ These programs often are funded through the Maternal and Child Health (MCH) Block Grant Program,⁶⁸ which is administered by the Health Resources and Services Administration (HRSA), and the Categorical Grant Program, which is administered by the Centers for Disease Control (CDC).⁶⁹ Other government-funded child health programs that conduct childhood lead screening are Medicaid's Early and Periodic Screening, Diagnostic, and Treatment Program (EPSDT),⁷⁰ the Supplemental Food Program for Women, Infants, and Children (WIC),⁷¹ and Head Start.⁷²

67. Waldman, *supra* note 17, at 47. Yet, in 1985, only 4% of children under age 6 (approximately 800,000) were tested. *Id.* Interestingly, middle-class children are tested less frequently than poor children. *Id.* Massachusetts is the only state that mandates testing of children for lead poisoning. *Id.*; see also *State Activities for Prevention of Lead Poisoning Among Children—United States, 1992*, 269 JAMA 1614, 1614 (1993); Richard W. Clapp, *The Massachusetts Childhood Lead-Poisoning Prevention Program, in* LOW LEVEL LEAD EXPOSURE: THE CLINICAL IMPLICATIONS OF CURRENT RESEARCH 285, 285-92 (Herbert L. Needleman ed., 1980).

68. The MCH Block Grants are the principal source of federal funding for states to maintain and improve the health of mothers and children, including children with special needs. CDC, STRATEGIC PLAN FOR THE ELIMINATION OF LEAD POISONING IN YOUNG CHILDREN 17 (1991). State health agencies receive grants to provide MCH services to low income individuals who live in areas with limited health services and to take actions necessary to reduce the incidence of preventable diseases and handicapping conditions in children. *Id.*

69. The CDC Categorical Grant Program was authorized by the Lead Contamination Control Act of 1988. CDC, *supra* note 68, at 18. This program provides for childhood lead screening by state and local agencies, referral of children with elevated blood lead levels for treatment and environmental interventions, and education about childhood lead poisoning prevention. *Id.*

70. *Id.* EPSDT is a comprehensive prevention and treatment program available to persons under 21 years of age who receive Medicaid. *Id.* In 1989, more than four million persons (of the eligible 10 million) received initial or periodic screening health examinations. *Id.* Screenings are provided at various locations including physician offices, public health clinics, and community health centers. *Id.*

Screening services, as defined by statute, must include a blood-lead assessment "where age and risk factors indicate it is medically appropriate." *Id.* National data are not available on the number of children screened for lead poisoning through EPSDT since state-reported Medicaid performance and fiscal data are not broken down to such specific elements. *Id.* However, over the next several years, the CDC plans to compile the country's first official count of childhood lead poisoning to determine what areas are the most problematic and to generate appropriate solutions. Amanda Husted & Rebecca Perl, *Health Watch: CDC to Track Lead Levels in Nationwide Program*, ATLANTA J. & CONST., Aug. 28, 1992, at F3.

71. CDC, *supra* note 68, at 18. The U.S. Department of Agriculture's WIC program assists low-income pregnant women and their children who are under five years of age. *Id.* WIC benefits include supplemental food, nutrition education, and coordination of other sources of health services. *Id.*

As of March 1988, WIC provided benefits to an estimated 1.63 million children. *Id.* Although children must undergo a medical or nutritional assessment to receive benefits, Federal WIC regulations permit states to establish their own requirements for WIC certification

Milwaukee has a particularly aggressive screening program and conducts blood lead tests on children six months to six years of age based on CDC guidelines.⁷³ The Milwaukee Health Department (MHD) conducts blood-lead tests at community-based health centers, as well as through WIC, Day Care, and Head Start programs.⁷⁴ MHD also has conducted door-to-door screening in high-risk areas where eighty-five percent of children screened have had lead levels equal to or greater than fifteen $\mu\text{g/dL}$.⁷⁵

D. Environmental Testing

In addition to screening children, residences should be inspected for the presence of lead-based paint. The paint may be tested on site or in a laboratory, depending on the method used.⁷⁶ For example, do-it-yourself kits for home use are available.⁷⁷ One such kit uses a sodium sulfide solution that is placed on a paint chip.⁷⁸ If lead is present, the paint chip will slowly turn darker. However, this test presents two major problems: materials other than lead may cause false positive results, and paint resins may prevent the sodium sulfide from causing the change in color.⁷⁹ Thus, the test may not correctly indicate the presence of lead.⁸⁰

examinations. *Id.* Regulations permit using the EP test and define lead poisoning as a nutritionally-related medical condition that can be the basis for certifying a child to receive WIC benefits. *Id.*

72. *Id.* Head Start provides a comprehensive developmental program for low-income children between three and five years of age. CDC, *supra* note 68, at 19. Approximately 24% of eligible Head Start children currently receive services under the program. *Id.* Although mainly known as an educational program, 99% of Head Start children receive medical screenings (54% of which are provided through EPSDT) that may include screening for lead poisoning if lead poisoning is prevalent in the community. *Id.* National data on the extent of lead screening conducted through Head Start are not available. *Id.*

73. Murphy, *supra* note 32, at 2. Milwaukee's screening efforts are organized as a public-private partnership between MHD and private medical doctors. *Id.* MHD conducts intensive health and environmental follow-up services to lead poisoned children. *Id.* The private medical provider then assumes responsibility for medical management, which MHD believes is cost effective. *Id.*

74. *Id.*

75. *Id.*

76. U.S. CONSUMER PROD. SAFETY COMM'N, WHAT YOU SHOULD KNOW ABOUT LEAD-BASED PAINT IN YOUR HOME, CONSUMER PRODUCT SAFETY ALERT 2 (1990).

77. *Id.* The U.S. Consumer Product Safety Commission has not yet evaluated these kits. *Id.*

78. *Id.*

79. *Id.*

80. *Id.*

Moreover, chip darkening can only be detected on very light-colored paint.⁸¹

Another in-home test uses X-ray fluorescence to determine whether the paint contains any lead.⁸² Although the test can be done in the home, it can only be performed by trained professionals or those who have passed a state or local government training course because the test requires specialized equipment⁸³ that contains radioactive materials.⁸⁴ Additionally, this method has not proven reliable in some studies.⁸⁵

Paint may also be tested in laboratories.⁸⁶ Although considered more reliable than other methods, the test costs twenty to fifty dollars per sample.⁸⁷ Paint samples are removed from painted surfaces and sent to a lab.⁸⁸ The U.S. Department of Housing and Urban Development (HUD) recommends that exposure be reduced when the lead in paint is greater than 0.5% by lab testing, or greater than one mg/cm² by X-ray fluorescence.⁸⁹

E. Medical Sequelae

1. Effects of Low-Level Exposure

The average American carries about five to six µg/dL of lead in his or her blood.⁹⁰ However, because lead serves no known bodily function, the amount of lead that is "normal" is zero.⁹¹ Epidemiologic studies have identified harmful effects of lead in children at blood lead levels of

81. *Id.*

82. *Id.*

83. *Id.*

84. *Id.*

85. *Id.*

86. *Id.*

87. *Id.*

88. *Id.* Several samples should be taken from each affected room. To remove a sample, a sharp knife should be used to cut through the edges of the paint. *Id.* The lab will indicate the size needed, usually about two inches by two inches. *Id.* The paint should then be lifted off with a clean putty knife and put into the container, including all layers of the paint, because lower layers may contain lead. *Id.* However, underlying wood, plaster, metal, or brick should not be included. *Id.* The sample should be placed in a resealable plastic bag or container provided by the lab. *Id.* The bags or containers should be labeled with the resident's name and location from which the paint was taken. *Id.* The surface should then be wiped with a wet cloth or paper towel to remove excess dust. *Id.*

89. *Id.*

90. Greeley, *supra* note 9, at 29.

91. *Id.*

ten $\mu\text{g/dL}$,⁹² and some studies suggest harmful effects at even lower levels.⁹³

Although blood-lead levels as low as ten $\mu\text{g/dL}$ usually do not cause distinctive symptoms,⁹⁴ such levels are associated with decreased intelligence and impaired neurobehavioral development.⁹⁵ Many other effects begin at these low blood-lead levels, including decreased stature or growth,⁹⁶ decreased hearing acuity,⁹⁷ decreased ability to maintain balance⁹⁸ and steady posture,⁹⁹ behavioral disturbances,¹⁰⁰ impaired vision,¹⁰¹ and disrupted vitamin D metabolism.¹⁰² Also, maternal and

92. *Id.* In the 1970s, scientists set the maximum safe blood-lead level for adults at 45 $\mu\text{g/dL}$, and, in 1985, the limit was set at 25 $\mu\text{g/dL}$ for children. *Id.* at 28-29. Since then, research shows that adverse effects actually occur at far lower levels. *Id.*; *Fatal Pediatric Poisoning from Leaded Paint - Wisconsin, 1990*, 40 MORBIDITY AND MORTALITY WEEKLY REP. 193, 194 (1991) [hereinafter *Morbidity and Mortality*].

93. Greeley, *supra* note 9, at 29. However, available research has not adequately evaluated effects below about 10 $\mu\text{g/dL}$. *Id.* The effects of lead on children are more severe than on adults. S. REP. NO. 152, *supra* note 1, at 2. This is because (1) children generally ingest more lead per unit of body weight than adults and are thus more vulnerable to its effects; (2) children have higher absorption rates for lead than adults (40% for infants compared to 5% to 15% for adults); (3) children have less bone tissue in which to store lead, leaving more lead in the blood to exert its toxic effects on various body organs; (4) children's nervous systems (especially the blood-brain barrier) are not fully formed and so the same cellular lead exposure may produce disproportionate results compared to adults; and (5) cognitive effects occur at lower levels in children. *Id.* at 3.

Fetuses may be even more vulnerable to lead toxicity than children. *Id.* at 4. They also may be more likely to be lead poisoned because lead in women's bones may be mobilized during pregnancy and lactation (particularly to alleviate calcium deficiencies) and thus expose fetuses and infants through the placenta and breast milk. *Id.*

94. CDC, *supra* note 18, at 2-3; see also Sue Binder & Thomas Matte, Editorial, *Childhood Lead Poisoning: The Impact of Prevention*, 269 JAMA 1679 (1993).

95. J. Michael Davis & David J. Svendsgaard, *Lead and Child Development*, 329 NATURE 297, 297 (1987); Paul Mushak et al., *Prenatal and Postnatal Effects of Low-Level Lead Exposure: Integrated Summary of a Report to the U.S. Congress on Childhood Lead Poisoning*, 50 ENVTL. RES. 11 (1989).

96. Bornschein, *supra* note 61; J. Raloff, *Clues to How Lead Impairs Growth, Vision*, 136 SCIENCE NEWS 87, 87 (1989); Joel Schwartz et al., *Relationship Between Childhood Blood Lead Levels and Stature*, 77 PEDIATRICS 281, 281-88 (1986); R. Shukla et al., *Fetal and Infant Lead Exposure: Effects on Growth in Stature*, 84 PEDIATRICS 604, 604-12 (1989).

97. Joel Schwartz & David Otto, *Blood Lead, Hearing Thresholds, and Neurobehavioral Development in Children and Youth*, 42 ARCHIVES OF ENVTL. HEALTH 153, 153-60 (1987).

98. J. Raloff, *Lead Effects Show in Child's Balance*, 135 SCIENCE NEWS 54, 54 (1991).

99. A. Bhattacharya et al., *Postural Disequilibrium Quantification in Children with Chronic Lead Exposure: A Pilot Study*, 9 NEUROTOXICOLOGY 327, 327-40 (1988).

100. Greeley, *supra* note 9, at 27; Waldman, *supra* note 17, at 47.

101. Raloff, *supra* note 96, at 87.

102. CDC, *supra* note 18, at 9.

umbilical cord blood-lead levels of ten to fifteen $\mu\text{g/dL}$ appear to be associated with reduced gestational age and reduced weight at birth.¹⁰³

The primary target organ for lead toxicity is the brain or central nervous system (CNS). Numerous epidemiologic studies of children have linked low-level lead exposure to impairments in CNS functions, including delayed cognitive development, reduced IQ scores, and impaired hearing.¹⁰⁴ For example, peripheral nerve dysfunction (reduced nerve conduction velocities) has been found in children with blood-lead levels below forty $\mu\text{g/dL}$. In addition, reduced IQ scores have been found in children with blood-lead levels below twenty-five $\mu\text{g/dL}$ and may be associated with lead levels below ten $\mu\text{g/dL}$.¹⁰⁵

The most notable studies on neurobehavioral and IQ deficits are those conducted by Dr. Herbert Needleman and his associates. A 1979 study by Dr. Needleman found that young children exposed to lead had intellectual, attentional, and behavioral deficits.¹⁰⁶ Specifically, the study showed a five-point difference in mean IQ scores between the low-

103. *Id.*; David Bellinger et al., *Longitudinal Analyses of Prenatal and Postnatal Lead Exposure and Early Cognitive Development*, 316 NEW ENG. J. MED. 1037, 1037-43 (1987).

104. CDC, *supra* note 18, at 9; see, e.g., Margherita Bergomi et al., *Relationship Between Lead Exposure Indicators and Neuropsychological Performance in Children*, 31 DEV. MED. CHILD NEUROLOGY 181 (1989); D.M. Fergusson et al., *A Longitudinal Study of Dentine Lead Levels, Intelligence, School Performance and Behavior. Part II. Dentine Lead and Cognitive Ability*, 29 J. CHILD PSYCHOL. PSYCHIATRY 793 (1988); Mary Fulton et al., *Influence of Blood Lead on the Ability and Attainment of Children in Edinburgh*, 1 LANCET 1221 (1987); Ole Norby Hansen et al., *A Neuropsychological Study of Children with Elevated Dentine Lead Level: Assessment of the Effect of Lead in Different Socio-Economic Groups*, 11 NEUROTOXICOLOGY AND TERATOLOGY 205 (1989); B.A. Hawk et al., *Relation of Lead and Social Factors to IQ of Low-SES Children: A Partial Replication*, 91 AM. J. MENTAL DEFICIENCY 178 (1986); R. Lansdown et al., *The Relationship Between Blood Lead Concentrations, Intelligence, Attainment and Behaviour in a School Population: The Second London Study*, 57 INT'L ARCHIVES OCCUPATIONAL ENVTL. HEALTH 225 (1986); T. Lyngbye et al., *Learning Disabilities in Children: Significance of Low-Level Lead-Exposure and Confounding Factors*, 79 ACTA. PEDIATR. SCAND. 352 (1990); Herbert L. Needleman & Constantine A. Gatsonis, *Low-Level Lead Exposure and the IQ of Children*, 263 JAMA 673 (1990); Stephen R. Schroeder et al., *Separating the Effects of Lead and Social Factors on IQ*, 38 ENVTL. RES. 144 (1985); P.A. Silva et al., *Blood Lead, Intelligence, Reading Attainment, and Behaviour in Eleven Year Old Children in Dunedin, New Zealand*, 29 J. CHILD PSYCHOL. PSYCHIATRY 43 (1988); Gerhard Winneke et al., *Results from the European Multicenter Study on Lead Neurotoxicity in Children: Implications for Risk Assessment*, 12 NEUROTOXICOLOGY AND TERATOLOGY 553 (1990); William Yule et al., *The Relationship Between Blood Lead Concentrations, Intelligence and Attainment in a School Population: A Pilot Study*, 23 DEV. MED. CHILD. NEUROLOGY 567 (1981).

105. CDC, *supra* note 18, at 9. A recent evaluation of 24 major cross-sectional studies of the effect of lead on intelligence strongly supports the hypothesis that children's IQ scores are inversely related to lead exposure. *Id.* (citing Needleman & Gatsonis, *supra* note 104, at 673-78).

106. Herbert L. Needleman et al., *Deficits in Psychologic and Classroom Performance of Children with Elevated Dentine Lead Levels*, 300 NEW ENG. J. MED. 689 (1979).

exposure and high-exposure groups, with children in the high-exposure group being three times more likely to have IQs below eighty. None of the high-lead children had IQs higher than 125, compared to 5% of the low-lead group.¹⁰⁷ In a follow-up study done eleven years later,¹⁰⁸ Dr. Needleman found that children who had been exposed to moderate lead levels in preschool years were seven times more likely to drop out of high school and six times more likely to have a significant reading disability.¹⁰⁹ In addition, the children exposed to higher lead levels had lower class standing, increased absenteeism, lower vocabulary scores, and lower grammatical reasoning scores, even after researchers controlled for other variables.¹¹⁰ Based on this research, Dr. Needleman and his colleagues concluded that childhood lead exposure is associated with CNS functioning deficits that persist into young adulthood.¹¹¹

2. Effects of High-Level Exposure

Very severe lead exposure (blood-lead levels greater than or equal to eighty $\mu\text{g/dL}$)¹¹² can cause coma, convulsions, profound mental retardation, seizures, and death.¹¹³ Lead encephala-

107. S. REP. NO. 152, *supra* note 1, at 4; see also Needleman, *supra* note 106; Peter A. Baghurst et al., *Environmental Exposure to Lead and Children's Intelligence at the Age of Seven Years: The Port Pirie Cohort Study*, 327 NEW ENG. J. MED. 1279 (1992).

108. Herbert L. Needleman et al., *The Long-Term Effects of Exposure to Low Doses of Lead in Childhood: An Eleven-Year Follow-Up Report*, 322 NEW ENG. J. MED. 83, 83-88 (1990).

109. *Id.* at 86.

110. *Id.* at 85.

111. *Id.* at 83; see also Greeley, *supra* note 9, at 27-28. However, Needleman's critics have alleged that his research was methodologically flawed and have filed a complaint with federal investigators. Joseph Palca, *Get-The-Lead-Out Guru Challenged*, 253 SCIENCE 842 (1991).

112. Waldman, *supra* note 17, at 47. Minimal amounts of lead can cause lead poisoning. *Id.* For example, a child can be poisoned (60-80 $\mu\text{g/dL}$) by ingesting 1 milligram of lead-paint dust (the equivalent of about 3 granules of sugar) daily throughout childhood. *Id.* A child would only have to ingest the equivalent of 1 granule of sugar a day to reach a blood-lead level of 35 $\mu\text{g/dL}$. *Id.*

113. CDC, *supra* note 68, at 2. In September 1990, a two-year-old boy from Waukesha, Wisconsin, died from lead-based paint exposure. *Morbidity and Mortality*, *supra* note 92, at 193; Editorial, *Lead Poisoning Hasn't Gone Away*, ST. LOUIS POST-DISPATCH, Apr. 7, 1991, at 2G; CDC Urges Annual Blood Tests for Children Exposed to Lead, 5 ASBESTOS CONTROL REPORT, Apr. 11, 1991, at 1. Autopsy tests revealed that the boy had a blood-lead level of 144 $\mu\text{g/dL}$, which is almost 10 times the level known to cause brain damage. *Id.* According to the Waukesha County Medical Examiner, the lead poisoning was so severe that "[y]ou could see small chips of lead in the x-rays of the boy." *Boy Dies of Lead Poisoning after Eating Paint Chips*, CHI. TRIB., Sept. 20, 1990, at 3M. The child had been lethargic and lacked an appetite for four days after eating the paint chips. CDC Urges Annual Blood Tests for Children Exposed to Lead, *supra*, at 1. The boy apparently was exposed to lead-based paint while living

lopathy¹¹⁴ is usually associated with blood-lead levels greater than one hundred µg/dL, although it has been reported at blood-lead levels as low as seventy µg/dL.¹¹⁵ Children with acute lead encephalopathy often have a recent history of symptoms such as anorexia, apathy, decreased play activity, hyperirritability, aggressiveness, poor coordination, and sporadic vomiting.¹¹⁶ These children can rapidly progress to death; therefore, lead levels greater than or equal to seventy µg/dL or the onset of encephalopathy constitute an acute medical emergency.¹¹⁷

3. Treatment

a. Chelation

Drugs are used to decrease the amount of lead in the system and thereby reduce the extent of lead poisoning.¹¹⁸ These drugs chelate (or remove) lead by binding to the lead in the bloodstream and expediting its elimination through urination.¹¹⁹ Until recently, one of the few chelating agents available was calcium disodium versenate (EDTA).¹²⁰ However, the FDA has now approved a new drug orally administered called Chemet (succimer).¹²¹ Chemet is a significant breakthrough in treating lead poisoning because, unlike other chelating agents, it removes lead from the body while leaving essential trace elements.¹²² Additionally, Chemet is viewed as psychologically preferable because it is administered orally,¹²³ rather than through intravenous or intramuscular injection.¹²⁴

with his homeless parents in a crumbling former office building that was littered with paint chips, dust, and debris. *Id.*

114. Lead encephalopathy is a toxic lead poisoning of the brain.

115. *Morbidity and Mortality*, *supra* note 92, at 194.

116. *Id.*

117. *Id.* Lead is extremely toxic because the body, in effect, mistakes it for calcium. Greeley, *supra* note 9, at 27; Waldman, *supra* note 17, at 47. Unable to use or metabolize lead, the body stores it in blood, soft body tissues, teeth, and bones. *Id.*; Matte, *supra* note 57, at 3. While it can be removed from the system through chelation, most absorbed lead continues to accumulate over a lifetime. Waldman, *supra* note 17, at 47.

118. CDC, *supra* note 18, at 99.

119. *Id.*

120. *Id.* at 100-01.

121. *Id.* at 102.

122. *Id.* When Chemet was given every 8 hours for 5 days to children with lead poisoning, it caused up to a 78% drop in blood-lead levels. Greeley, *supra* note 9, at 3.

123. Chemet is approved only for use in children with blood-lead levels greater than 45 µg/dL. *Id.* The recommended treatment course lasts 19 days and does not require hospitalization. *Id.* However, its proposed labeling warns that Chemet is "not a substitute for preventing further exposure to lead." *Id.*

124. *Id.*

b. Abatement

Although interim control procedures (such as patching, painting, and keeping floors and walls free of dust) may reduce lead exposure, the only permanent method of preventing lead poisoning is abatement.¹²⁵ However, abatement can cost thousands of dollars per dwelling and if undertaken nationwide, could cost a staggering \$100 billion to \$500 billion.¹²⁶ For example, the City of Milwaukee's revised Lead Poisoning Prevention and Control Ordinance, in effect since June 1991, outlines minimum standards for abatement work.¹²⁷ The ordinance requires mandatory temporary hazard control using a high-efficiency particle accumulator (HEPA) vacuum¹²⁸ within five days of receiving an abatement order; using designated abatement methods (*e.g.*, wet scraping, heat guns, or nonmethylene chloride strippers followed by encapsulants); prohibiting certain other abatement methods (*e.g.*, sanding, sandblasting, grinding, and using open flame torch); and requiring post-abatement clean-up using a HEPA vacuum and phosphate wash.¹²⁹ All abatement work must be completed within a thirty-day period by an approved lead abatement contractor.¹³⁰

IV. WISCONSIN LAWS IMPOSING LEGAL LIABILITY FOR LEAD-BASED PAINT POISONING

A. Broker Liability

1. Negligence

Section 452.01(2) of the Wisconsin Statutes defines a real estate broker¹³¹ essentially as anyone who engages in business activity relating to

125. CDC, *supra* note 18, at 18-19; *see* Rist, *supra* note 12, at 61.

126. CDC, *supra* note 18, at 18-19.

127. Murphy, *supra* note 32, at 4. Abatement under the Milwaukee ordinance averages \$2500 per unit. *Id.* The Lead Abatement Reimbursement Program, however, may reimburse property owners up to \$1000 or 50% of their abatement costs. *Id.*

128. MHD currently has 10 HEPA vacuums that are loaned free of charge to persons in need of lead abatement work or seeking prevention. *Id.* This program is administered jointly with the Department of Building Inspection's tool loan centers. *Id.*

129. *Id.*

130. *Id.*

131. In relevant part, § 452.01(2), defines "broker" as one who:

[f]or another, and for commission, money or other thing of value, sells, exchanges, buys or rents, or offers or attempts to negotiate a sale, exchange, purchase or rental of an interest or estate in real estate; [or who is] engaged wholly or in part in the business of selling real estate to the extent that a pattern of real estate sales is established, whether or not such real estate is owned by such person.

WIS. STAT. § 452.01(2)(a)-(b) (1991-92).

real estate.¹³² A real estate broker may be liable in tort to a third party who is injured through the broker's action or inaction. In an action for broker negligence, the complainant must allege and prove a duty of care of the broker, a breach of that duty, a causal connection between the conduct and the injury, and actual loss or damage resulting from the injury.¹³³

Regulations establishing realtor duties are set forth in the Wisconsin Administrative Code. Regarding inspection and disclosure, section RL 24.07 specifically "imposes a duty upon a broker to conduct a reasonably competent and diligent investigation to determine the existence of material facts adverse to the transaction."¹³⁴ If the broker discovers materially adverse facts during an investigation, the broker must reveal them in writing and in a timely manner to the buyer.¹³⁵ This duty is breached if the broker fails to investigate, discover, and disclose structural defects and "other relevant aspects of the property,"¹³⁶ such as defects caused by "unsafe concentrations of, or unsafe conditions relating to . . . lead in paint, lead in soil, [or] lead in water supplies or plumbing system[s]."¹³⁷

132. JAMES B. MACDONALD & WALTER B. RAUSHENBUSH, WISCONSIN REAL ESTATE LAW § 1.04, at 1-4 (1984).

133. *Grube v. Daun*, 173 Wis. 2d 30, 52, 496 N.W.2d 106, 113 (Ct. App. 1992) (citing *Coffey v. City of Milwaukee*, 74 Wis. 2d 526, 531, 247 N.W.2d 132, 135 (1976)).

134. *Id.*; WIS. ADMIN. CODE § RL 24.07(1) (July 1992). Some critics of broker liability believe that a broker is not in a reasonable position to know whether lead paint hazards exist. According to William North, a lawyer and executive vice president of the National Association of Realtors, the problem of imposing liability on a broker is that "[a] broker is licensed to sell property, not to search for lead paint, asbestos or any other hazardous material." Thomas J. Lueck, *The Pervasive Problem of Lead Paint*, N.Y. TIMES, Apr. 7, 1991, § 10, at 1. Mr. North also believes the problem for brokers, as well as for many home sellers, is that lead-based paint is often buried under several coats of paint and difficult to detect, and that federal agencies do not provide "any reasonable standard" for what levels of lead-based paint are acceptable. *Id.*

135. *Grube*, 173 Wis. 2d at 52, 496 N.W.2d at 113; WIS. ADMIN. CODE § RL 24.07(1).

136. *Grube*, 173 Wis. 2d at 52, 496 N.W.2d at 113; WIS. ADMIN. CODE § RL 24.07(1)(a).

137. WIS. ADMIN. CODE § RL 24.07(2). WIS. ADMIN. CODE § RL 24.07(3) in pertinent part provides that a broker,

who becomes aware of information suggesting the possibility of an adverse fact material to the transaction, shall be practicing competently if [he or she] discloses to the parties the information suggesting the possibility of adverse facts material to the transaction, recommends the parties obtain expert assistance to inspect or investigate for possible adverse facts material to the transaction, and, if directed by the parties, drafts appropriate inspection or investigation contingencies.

Id. § RL 24.07(3). It should be noted that "[t]his provision is not limited to the condition of the property, but includes other adverse facts material to the transaction, including but not limited to defects and conditions included within the report form under s. 709.03, Stats." *Id.* (emphasis added).

To support the remaining elements of negligence, the plaintiff must show that he or she relied upon the broker to fairly represent any defects the broker observed or should have observed in the exercise of ordinary care.¹³⁸ Moreover, the plaintiff must show that, as a result of the purchase, a child was poisoned, the poisoning injured the child, and abatement expenses resulted.¹³⁹

Liability, however, does not always follow when negligence and negligence as cause-in-fact exist.¹⁴⁰ For instance, public policy reasons may prevent liability from being imposed.¹⁴¹ Additionally, because a broker acts as an agent of the seller (or principal), a broker may be relieved of liability where that broker "is exercising a privilege of the principal, or a privilege held by [the broker] for the protection of the principal's interests, or where the principal owes no duty or less than the normal duty of care to the person harmed."¹⁴²

2. Misrepresentation by Broker

(a) *Common Elements of Broker Misrepresentation*

Wisconsin recognizes three forms of misrepresentation: intentional misrepresentation, intentional misrepresentation through nondisclosure, and strict responsibility. These forms of misrepresentation share three common elements: (1) the defendant must make a factual representa-

138. *Grube*, 173 Wis. 2d at 52, 496 N.W.2d at 113-14.

139. See *id.* For a discussion of litigation strategies and the use of expert testimony in lead poisoning cases, see Benjamin Hiller & Jeffrey M. Feuer, *Expert Testimony in Childhood Lead-Poisoning Cases*, TRIAL, Mar. 1991, at 46; J. Douglas Peters, *Litigating the Brain-Damaged Baby Case: From the Initial Interview to the Trial*, TRIAL, May 1989, at 32.

140. *Grube*, 173 Wis. 2d at 53, 496 N.W.2d at 114. For information on defending against lead poisoning cases, see Thomas J. Mulligan & Richard P. Stone, *Defending Lead Poisoning Liability Claims*, FOR THE DEFENSE, Apr. 1992, at 2; see also *Caroline v. Reicher*, 304 A.2d 831 (Md. 1973) (discussing contributory negligence of lead-poisoned child's parents); *Ankiewicz v. Kinder*, 563 N.E.2d 684 (Mass. 1990) (discussing contribution regarding two or more tortfeasors jointly and severally liable for same injury); *City of St. Louis v. Brune*, 520 S.W.2d 12 (Mo. 1975) (discussing challenging a city lead poisoning ordinance on constitutional grounds); *Norwood v. Lazarus*, 634 S.W.2d 584 (Mo. Ct. App. 1982) (discussing contribution where lead paint poisoning occurs at two residences).

141. *Grube*, 173 Wis. 2d at 53, 496 N.W.2d at 114 (citation omitted). However, nonliability based on public policy arguments will not likely be determined on a summary judgment motion. This is because "it is better to have a full factual resolution of the action by trial before policy factors will be taken into consideration to preclude liability for negligence." *Id.* (citation omitted); *Coffey v. City of Milwaukee*, 74 Wis. 2d 526, 543, 247 N.W.2d 132, 140-41 (1976).

142. *Grube*, 173 Wis. 2d at 51, 496 N.W.2d at 113 (quoting *Purtell v. Tehan*, 29 Wis. 2d 631, 639, 139 N.W.2d 655, 659 (1966)).

tion, (2) which is untrue, and (3) which the plaintiff believed to be true and relied on to the plaintiff's detriment.¹⁴³

To satisfy these common elements, a buyer who purchased a house in which a child was lead poisoned must allege and prove that the broker made representations about the suitability of the house for children or the condition of the paint itself.¹⁴⁴ Second, the buyer must allege and prove that he or she relied on the broker's representations in deciding to purchase the property. Finally, the buyer must allege and prove that because of the purchase a child was injured through lead poisoning and that costs have been incurred for lead-based paint abatement.¹⁴⁵

(b) Intentional Misrepresentation by Broker

In addition to the common elements of misrepresentation, a buyer claiming intentional misrepresentation by a broker must allege and prove two other elements.¹⁴⁶ First, the buyer must allege and prove that the broker "either made the representation knowing it was untrue or made it recklessly without caring whether it was true or false."¹⁴⁷ Second, the buyer must allege and prove that the broker made the representation with an intent to defraud and induce the buyer to act upon it.¹⁴⁸ These elements can be satisfied by showing that the broker "failed to investigate the property adequately in order to reliably inform himself of the actual condition of the real estate and its improvements"¹⁴⁹ or that the broker intentionally misled the buyer when showing the property to the buyer for possible purchase.¹⁵⁰

(c) Intentional Misrepresentation Through Nondisclosure

A broker's silence or failure to disclose a fact is generally not an intentional misrepresentation unless the broker had a duty to disclose the fact.¹⁵¹ If such a duty exists, failure to disclose is treated as a representa-

143. *Whipp v. Iverson*, 43 Wis. 2d 166, 169, 168 N.W.2d 201, 203-04 (1969); *Grube*, 173 Wis. 2d at 53-54, 496 N.W.2d at 114; *see also* Wis. J.I.—CIVIL 2400-03.

144. *See Grube*, 173 Wis. 2d at 54, 496 N.W.2d at 114.

145. *See id.*

146. *Id.* at 54, 496 N.W.2d at 114-15.

147. *Id.* at 54, 496 N.W.2d at 114 (citing *Lundin v. Shimanski*, 124 Wis. 2d 175, 184, 368 N.W.2d 676, 681 (1985)); *see also* Wis. J.I.—CIVIL 2401.

148. *Grube*, 173 Wis. 2d at 54, 496 N.W.2d at 114.

149. *Id.*

150. *Id.*

151. *See id.* at 56, 496 N.W.2d at 115 (citing *Ollerman v. O'Rourke Co.*, 94 Wis. 2d 17, 26, 288 N.W.2d 95, 99-100 (1980) (footnote omitted)). This general rule also applies to negligent misrepresentation and strict responsibility. *Id.* (citing Wis. J.I.—CIVIL 2402-03).

tion of the nonexistence of the fact.¹⁵² Thus, where a broker has a duty to disclose material facts, such as the presence of lead paint or lead paint hazards, failure to do so supports a claim of misrepresentation through nondisclosure.¹⁵³

(d) Negligent Misrepresentation

Negligent misrepresentation requires a buyer to allege and prove only one additional element beyond the three common elements required to establish misrepresentation.¹⁵⁴ Specifically, the buyer must allege and prove that the broker was negligent in making the misrepresentation¹⁵⁵ relating to the lead paint. Such negligence may be demonstrated through facts showing that the broker failed to exercise the ordinary care of a real estate broker in discovering and disclosing significant defects with the real estate.¹⁵⁶

(e) Strict Responsibility for Misrepresentation

In addition to the three common elements of misrepresentation, strict responsibility for misrepresentation requires that the plaintiff allege and prove two more elements. First, the buyer must demonstrate that the broker "made the representation based on his or her own personal knowledge, concerning a matter about which he or she purports to have knowledge, so that he or she may be taken to have assumed responsibility as in the case of warranty."¹⁵⁷ Second, the buyer must demonstrate that the broker had an economic interest in the transaction.¹⁵⁸ A plaintiff may prove the first element by showing that the broker "made the representations based on his own personal knowledge, or under circumstances in which he ought to have known the truth or untruth of the representations he made."¹⁵⁹ The plaintiff satisfies the second element by confirming "that representations were made to induce the [buyer] to buy the property, for which a real estate commission was paid to [the broker] as the listing agent of the property."¹⁶⁰

152. *Id.*

153. *See id.*

154. *Id.* at 55, 496 N.W.2d at 115.

155. *Id.* (citing *Consolidated Papers, Inc. v. Dorr-Oliver, Inc.*, 153 Wis. 2d 589, 593 n.2, 451 N.W.2d 456, 459 n.2 (Ct. App. 1989)); *see also* Wis. J.I.—CIVIL 2403.

156. *Grube*, 173 Wis. 2d at 55-56, 496 N.W.2d at 115.

157. *Id.* at 55, 496 N.W. 2d at 115; *Gauerke v. Rozga*, 112 Wis. 2d 271, 280, 332 N.W.2d 804, 809 (1983).

158. *Grube*, 173 Wis. 2d at 55, 496 N.W.2d at 115; *see also* Wis. J.I.—CIVIL 2402.

159. *Grube*, 173 Wis. 2d at 55, 496 N.W.2d at 115.

160. *Id.*

3. Deceptive Advertising

A broker also may be liable for lead-based paint poisoning of a child under the theory of deceptive advertising. Wisconsin's deceptive advertising statute, in pertinent part, provides:

No . . . agent . . . with intent to sell . . . any real estate . . . or with intent to induce the public in any manner to enter into any contract or obligation relating to the purchase [or] sale . . . of any real estate . . . shall make, publish, disseminate, circulate, or place before the public . . . in this state, in a newspaper, magazine or other publication, or in the form of a book, notice, handbill, poster, bill, circular, pamphlet, letter, sign, placard, card, label, or over any radio or television station, or in any other way similar or dissimilar to the foregoing, an advertisement, announcement, statement or representation of any kind to the public relating to such . . . purchase [or] sale . . . of such real estate . . . or to the terms or conditions thereof, which advertisement, announcement, statement or representation contains any assertion, representation or statement of fact which is untrue, deceptive or misleading.¹⁶¹

Section 100.18 has been applied to representations made in the sales of real estate and consumer goods.¹⁶² Furthermore, although the statute appears to apply only to advertising practices, the Wisconsin Supreme Court and the Wisconsin Courts of Appeals "have made clear that the statute intends to protect the public from *all* untrue, deceptive or misleading representations made in sales promotions, including representations made in face-to-face sales where no media advertising is involved."¹⁶³ Thus, even face-to-face or telephone misrepresentations relating to lead-based paint, if proved, are "deceptive advertising" within the scope of section 100.18.¹⁶⁴

4. The "As Is" Clause as a Broker's Defense

A real estate broker who makes a positive representation about the property may be liable for misrepresentation even if the property is sold on an "as is" basis.¹⁶⁵ The general effect of an "as is" clause "is to alert

161. *Id.* at 56-57, 496 N.W.2d at 116 (citing Wis. STAT. § 100.18(1) (1991-92)).

162. *Id.* at 57, 496 N.W.2d at 116; *Rach v. Kleiber*, 123 Wis. 2d 473, 484-85, 367 N.W.2d 824, 830 (Ct. App. 1985).

163. *Grube*, 173 Wis. 2d at 57, 496 N.W.2d at 116 (emphasis added); *see also* *State v. Automatic Merchandisers of Am., Inc.*, 64 Wis. 2d 659, 665, 221 N.W.2d 683, 686-87 (1974); *Bonn v. Haubrich*, 123 Wis. 2d 168, 173, 366 N.W.2d 503, 505 (Ct. App. 1985).

164. *See Grube*, 173 Wis. 2d at 57, 496 N.W.2d at 116.

165. *Id.* at 59, 496 N.W.2d at 116.

the buyer that he or she must determine the condition of the property being purchased.”¹⁶⁶ Thus, by using an “as is” clause, a seller and an agent may protect themselves from claims premised upon nondisclosure by shifting the burden of investigation onto the buyer.¹⁶⁷ However, when a broker makes affirmative representations about the condition of the property, the “as is” clause does not relieve the broker of the duty to investigate the representation and disclose to the potential buyer the results.¹⁶⁸ Additionally, once the broker has affirmatively represented some aspect of the property, “the buyer is entitled to rely upon that statement and expect full and fair disclosure of all material facts relating to that aspect of the property.”¹⁶⁹ Consequently, although the buyer has a duty to investigate, the broker is not relieved of the duty of full and fair disclosure.¹⁷⁰

Even in a real estate purchase contract to sell property “as is” and without any warranties,¹⁷¹ an “as is” clause only shields the broker from breach of warranty claims in contract, not from tort claims based on misrepresentation.¹⁷² Such liability exists because Wisconsin law recognizes the general rule that liability for misrepresentation may occur despite integration clauses negating any unincorporated representations.¹⁷³ Thus, “as a matter of public policy, tort disclaimers in contracts will not be honored unless the disclaimer is specific as to the tort it wishes to

166. *Id.*

167. *Id.* at 61, 496 N.W.2d at 117; *see, e.g.,* *Kaye v. Buehrle*, 457 N.E.2d 373, 376 (Ohio Ct. App. 1983).

168. *Grube*, 173 Wis. 2d at 59, 496 N.W.2d at 116.

169. *Id.* at 61, 496 N.W.2d at 117. However, in these situations, the exculpatory clause may still have evidentiary value to demonstrate that no representations were relied upon. *Id.*; *see also* *Sheehy v. Lipton Indus., Inc.*, 507 N.E.2d 781, 784 (Mass. App. Ct. 1987).

170. *See Grube*, 173 Wis. 2d at 58, 496 N.W.2d at 116.

171. *Id.* at 59; 496 N.W.2d at 116-17; *Omernik v. Bushman*, 151 Wis. 2d 299, 300, 444 N.W.2d 409, 410 (Ct. App. 1989).

172. *Grube*, 173 Wis. 2d at 60, 496 N.W.2d at 117.

173. *Id.* at 59-60, 496 N.W.2d at 117 (citing *Anderson v. Tri-State Home Improvement Co.*, 268 Wis. 455, 459, 67 N.W.2d 853, 856-57 (1955)). As indicated in *Grube*, “[t]he holdings of *Anderson* and its progeny rest on the careful balancing of the principles of contract and tort law.” *Id.* at 60, 496 N.W.2d at 117. Specifically, the law of contracts protects justifiable expectations and transaction security. *Id.*; *Merten v. Nathan*, 108 Wis. 2d 205, 211, 321 N.W.2d 173, 177 (1982). It also “generally support[s] the enforcement of an exculpatory clause.” *Grube*, 173 Wis. 2d at 60, 496 N.W.2d at 117. In contrast, the law of torts, compensates individuals for injuries sustained from another’s unreasonable conduct and serves to prevent future harm. *Id.* These tort law principles make Wisconsin courts reluctant to allow parties to contractually shift the burden of negligent conduct from the actor to the victim. *Id.* at 60-61, 496 N.W.2d at 117.

disclaim."¹⁷⁴ In order to be effective, the disclaimer must make apparent that an express bargain was struck to forego the possibility of tort recovery for lead-based paint poisoning in exchange for negotiated alternate economic benefits.¹⁷⁵

B. Seller Liability

1. Seller Liability for Broker Misrepresentations

Under agency law principles, a seller may be vicariously liable for its broker's misrepresentations.¹⁷⁶ Wisconsin agency law provides that a "seller is bound to know that the representations made by himself or his authorized agent to induce a sale are true."¹⁷⁷ Furthermore, a seller may be held liable for the agent's representations even if the seller did not know the representations were made.¹⁷⁸ Thus, a buyer may substantiate a claim for intentional misrepresentation, intentional misrepresentation through nondisclosure, negligent misrepresentation, and strict responsibility for misrepresentation against a seller through the representations of the seller's broker.¹⁷⁹

2. Seller Misrepresentation

In addition to liability for broker misrepresentations, a seller of residential property may be liable for a child's lead-based paint poisoning as a result of the seller's own misrepresentations. The Wisconsin Residential Seller Disclosure Law, set forth in Wisconsin Statutes Chapter 709,

174. *Grube*, 173 Wis. 2d at 60-61, 496 N.W.2d at 117; see also *Phillips Petroleum Co. v. Bucyrus-Erie Co.*, 131 Wis. 2d 21, 33, 388 N.W.2d 584, 589 (1986).

175. See *Grube*, 173 Wis. 2d at 60, 496 N.W.2d at 117; see also *Phillips Petroleum*, 131 Wis. 2d at 33, 388 N.W.2d at 589. Even if the scope of the "as is" clause was extended beyond the warranty context, the clause would need to specifically negate the existence of any broker negligence or misrepresentation as to lead-based paint. See *Grube*, 173 Wis. 2d at 60, 496 N.W.2d at 117. To use the clause as a defense, a broker also would need to show that the clause was reached through bargaining between the parties (e.g., in exchange for lower contract costs or express concessions regarding other terms). See *id.*

176. Agency is a "relationship between two persons, by agreement or otherwise, where one (the agent) may act on behalf of the other (the principal) and bind the principal by words and actions." BLACK'S LAW DICTIONARY 62 (6th ed. 1991). Under agency law, a principal is liable for the agent's actions when those actions are undertaken on the principal's behalf. *Id.*

177. *Grube*, 173 Wis. 2d at 66, 496 N.W.2d at 119 (quoting *First Nat'l Bank v. Scieszinski*, 25 Wis. 2d 569, 577, 131 N.W.2d 308, 313 (1964)).

178. *Id.* at 66, 496 N.W.2d at 119; see *Heal v. Stoll*, 176 Wis. 137, 146, 185 N.W. 242, 245 (1922).

179. For a description of broker misrepresentation, see *supra* notes 142-160 and accompanying text.

affirmatively requires sellers¹⁸⁰ of residential property to "inform buyers about defects affecting the property's structure or value, or posing potential health or safety concerns."¹⁸¹ Under section 709.02, the property owner must furnish within ten days after accepting the contract of sale to the prospective buyer a completed copy of the report under section 709.03.¹⁸² Section 709.03, in turn, requires the seller to respond to twenty-eight statements concerning various aspects of the property and to indicate whether each statement is correct, incorrect, or inapplicable.¹⁸³ In particular, one statement asks whether the seller is "aware of a defect caused by unsafe concentrations of, or unsafe conditions relating to . . . lead in paint, lead in soil, [or] lead in water supplies or plumbing system[s]."¹⁸⁴

Liability under chapter 709 is predicated on seller knowledge, and a seller will only be liable for misrepresentation if that seller has "notice or knowledge"¹⁸⁵ of a lead condition "that would significantly impair the health or safety of future occupants of the property."¹⁸⁶ Furthermore, the chapter imposes a duty of good faith on the seller, specifically requiring the seller to be honest in fulfilling disclosure duties.¹⁸⁷ Thus, a buyer who is "victimized by blatant seller misrepresentations" should be more than able to "obtain legal redress in the courts."¹⁸⁸

180. Chapter 709 generally applies to persons transferring by sale, exchange, or land contract real estate containing one to four dwelling units. Debra P. Conrad, *Truth or Consequences? Residential Seller Disclosure Law*, Wis. LAW., Aug. 1992, at 9, 10. However, it does not apply to personal representatives, trustees, conservators, and fiduciaries appointed by or subject to court supervision (but only if those persons never occupied the property); uninhabited real estate (e.g., new construction or property converted from commercial to residential use); and transfers exempt from real estate transfer fees (e.g., gifts between spouses or parent and child, tax sales, foreclosure sales, condemnations, and transfers by will, descent, or survivorship). *Id.*; see Wis. STAT. §§ 709.01, 77.25 (1991-92).

181. Conrad, *supra* note 180, at 9.

182. Wis. STAT. § 709.02.

183. *Id.* § 709.03; Conrad, *supra* note 180, at 10.

184. Wis. STAT. § 709.03.

185. *Id.*

186. *Id.* For a discussion on lender involvement in lead-based paint liability, see Michele Gilligan & Deborah A. Ford, *Investor Response to Lead-Based Paint Abatement Laws: Legal and Economic Considerations*, 12 COLUM. J. ENVTL. L. 243 (1987).

187. Wis. STAT. § 709.06; Conrad, *supra* note 180, at 11.

188. Conrad, *supra* note 180, at 11. The only buyer remedy specifically created by chapter 709 is the right to rescind the contract of sale in writing within two days of receiving the report without incurring any liability or loss of any deposits paid in the transaction. Wis. STAT. § 709.05. However, other common law remedies, such as damages, should also be available. See Conrad, *supra* note 180, at 11.

A buyer may agree to waive the statutory right to rescind after receiving the disclosure report and before the two-day rescission period has expired. Wis. STAT. §§ 709.05, 709.08. The

C. Landlord Liability

1. Liability Based on Contract Law

Wisconsin's common law established the general rule that a landlord was not liable for injuries to tenants and their visitors resulting from defects in the premises.¹⁸⁹ However, even under old common law, covenanting to make repairs imposed an affirmative duty on the landlord.¹⁹⁰ If the landlord failed to make such repairs, the landlord was liable for the tenant's injuries resulting from the dangerous condition.¹⁹¹ Once the landlord had such an affirmative duty to make repairs, Wisconsin law provided that, "in addition to a breach of contract action, a tenant has a separate negligence action when the landlord has contracted to make repairs and the landlord's failure to exercise ordinary care in making repairs is a cause of the tenant's personal injury or property damage."¹⁹²

Today, the Wisconsin Administrative Code continues to impose liability for breach of contract. Section 134.07 requires that a landlord specify the date or time period in which promised repairs or improvements will be made,¹⁹³ put in writing all promises made before the initial rental agreement, and furnish a copy to the tenant.¹⁹⁴ If this covenant to repair or make improvements is breached, a tenant may bring a civil action to recover damages together with costs, disbursements, and reasonable attorney fees.¹⁹⁵ An unbroken line of cases and statutory mandates continues to support the proposition that:

[A] landlord who contracts to make repairs to the premises assumes the duty to use ordinary care in keeping the premises in a safe and habitable condition. When the landlord fails or refuses to make promised repairs there is a violation of the duty to use ordi-

waiver of a buyer's right to rescind, however, should not affect the buyer's right to rely on the accuracy of the information provided in the report.

189. See, e.g., *Skrzypczak v. Konieczka*, 224 Wis. 455, 272 N.W. 659 (1937).

190. See *Pagelsdorf v. Safeco Ins. Co.*, 91 Wis. 2d 734, 284 N.W.2d 55 (1979); *Skrzypczak v. Konieczka*, 224 Wis. 455, 272 N.W. 659 (1937); *Flood v. Pabst Brewing Co.*, 158 Wis. 626, 149 N.W. 489 (1914); *Jacobs v. Karls*, 178 Wis. 2d 268, 504 N.W.2d 353 (Ct. App. 1993). For a general discussion of liability based on contract law, see Daniel G. LeVan, Note, *Landlord Liability for Lead Poisoning of Tenant Children Caused by Defects in the Premises*, 70 U. DET. MERCY L. REV. 429 (1993).

191. *Jacobs*, 178 Wis. 2d at 274, 504 N.W.2d at 355; see also Jean C. Love, *Landlord's Liability for Defective Premises: Caveat Lessee, Negligence, or Strict Liability?*, 1975 Wis. L. REV. 19; Barbara Maier, Recent Decision, 58 MARQ. L. REV. 191 (1975).

192. *Jacobs*, 178 Wis. 2d at 275, 504 N.W.2d at 356; see *Flood*, 158 Wis. at 632-33, 149 N.W. at 491.

193. WIS. ADMIN. CODE § RL 134.07(1) (Apr. 1993).

194. *Id.* § RL 134.07(2).

195. WIS. STAT. § 704.07(4) (1991-92).

nary care, and if that violation is a cause of personal injury or property damage, the injured party can assert a negligence cause of action.¹⁹⁶

Thus, a landlord covenanting to make necessary lead paint abatements may be held liable for failing to perform the abatement or for failing to use ordinary care in doing so.

2. Liability Based on an Implied Warranty of Habitability

A basic principle of Wisconsin tort law is that a person is liable for injuries resulting from conduct foreseeably creating an unreasonable risk of harm to others. Thus, Wisconsin imposes a duty on landlords to exercise ordinary care in maintaining rental premises.¹⁹⁷ This duty is imposed through an implied warranty of habitability and is implied in every apartment lease.¹⁹⁸ The rationale for imposing this duty was explained by the Wisconsin Supreme Court in *Pines v. Perssion*.¹⁹⁹ In *Pines*, the court determined that modern social conditions called for judicial recognition of a warranty of habitability implied in apartment leases because:

Legislation and administrative rules, such as the safe place statute, building codes, and health regulations, all impose certain duties on a property owner with respect to the condition of his premises. Thus, the legislature has made a policy judgment—that it is socially (and politically) desirable to impose these duties on a property owner—which has rendered the old common-law rule obsolete. To follow the old rule of no implied warranty of habitability in leases would, in our opinion, be inconsistent with the current legislative policy concerning housing standards. The need and social desirability of adequate housing for people in this era of rapid population increases is too important to be rebuffed by that obnoxious cliché, *caveat emptor*. Permitting landlords to rent “tumble-down” houses is at least a contributing cause of such problems as urban blight, juvenile delinquency, and high property taxes for conscientious landowners.²⁰⁰

Wisconsin's implied warranty of habitability statute requires that landlords keep all portions of the premises over which the landlords

196. *Jacobs*, 178 Wis. 2d at 277, 504 N.W.2d at 356.

197. *Pagelsdorf v. Safeco Ins. Co.*, 91 Wis. 2d 734, 745, 284 N.W.2d 55, 61 (1979). For a general discussion of landlord liability for negligent repair or maintenance, see LeVan, *supra* note 190; Maier, *supra* note 191.

198. Under current law, an apartment lease is regarded as a contract, not a conveyance. *Pines v. Perssion*, 14 Wis. 2d 590, 111 N.W.2d 409 (1961).

199. *Id.*

200. *Id.* at 595-96, 111 N.W.2d at 412-413. For information on Wisconsin safe-place law, see HOWARD H. BOYLE, JR., WISCONSIN SAFE-PLACE LAW REVISED (1980).

maintain control in reasonable states of repair,²⁰¹ make any necessary structural repairs,²⁰² and comply with local housing codes.²⁰³ Such codes frequently contain regulations regarding lead-based paint or dust. For example, Milwaukee's Lead Poisoning Prevention and Control Regulations expressly prohibit a residential owner from creating or allowing any lead-based nuisance to exist in or on the property.²⁰⁴ The city's ordinance also bans applying lead-bearing paints with a lead content of more than 0.06% by weight.²⁰⁵

Under section 704.07(4), if a residence becomes untenable because of a hazardous health condition, such as a lead paint hazard, a tenant may move from that residence unless the landlord promptly remedies the hazard.²⁰⁶ However, if the tenant elects to remain in possession, rent abates to the extent that the tenant is deprived of full and normal use.²⁰⁷ Also, the Wisconsin Department of Health and Social Services may order the landlord to "remove, replace or cover securely and permanently" all lead-bearing paints that are present on the surfaces of the residence and are creating a health hazard.²⁰⁸ If a municipality, rather than the state, issues the orders, failure to comply with the abatement order may also result in the municipality summarily abating the lead paint nuisance and assessing the abatement costs as a special tax upon the property.²⁰⁹

V. FEDERAL LIABILITY UNDER THE LEAD-BASED PAINT POISONING PREVENTION ACT OF 1992

A. *Lead-Based Paint Hazard Disclosure Requirement*

In October 1992, President Bush signed into law the Residential Lead-Based Paint Hazard Reduction Act of 1992.²¹⁰ This omnibus housing bill contained "Title X" (Title Ten), the most far-reaching piece of

201. WIS. STAT. § 704.07(2)(a)(1) (1991-92).

202. *Id.* § 704.07(2)(a)(3).

203. *Id.* § 704.07(2)(a)(5).

204. MILWAUKEE, WIS., CODE § 66-22(1)(a) (1991).

205. *Id.* § 66-22(1)(b).

206. WIS. STAT. § 704.07(4) (1991-92).

207. *Id.*

208. *Id.* § 151.07(2)(d).

209. *See, e.g.,* MILWAUKEE, WIS., CODE § 66-22(3)(d) (1991).

210. Residential Lead-Based Paint Hazard Reduction Act of 1992, Pub. L. No. 102-550, 42 U.S.C.A. § 4851 (West Supp. 1993); ALLIANCE TO END CHILDHOOD LEAD POISONING, UNDERSTANDING TITLE X: A PRACTICAL GUIDE TO THE RESIDENTIAL LEAD-BASED PAINT HAZARD REDUCTION ACT OF 1992, at 1 (1993).

federal legislation to date dealing with lead-based paint hazards.²¹¹ Title X is an anomaly because it is the only federal legislation that imposes direct legal liability for lead-based paint hazards on purely private property owners²¹² who own target housing.²¹³

Title X liability is imposed against residential real property²¹⁴ brokers, sellers, and landlords through the lead-based paint²¹⁵ related dis-

211. For the legislative history of Title X, see H.R. REP. NO. 1096, 102d Cong., 2d Sess. (1992), available in 1992 WL 405925. The stated purposes of Title X are:

- (1) to develop a national strategy to build the infrastructure necessary to eliminate lead-based paint hazards in all housing as expeditiously as possible;
- (2) to reorient the national approach to the presence of lead-based paint in housing to implement, on a priority basis, a broad program to evaluate and reduce lead-based paint hazards in the Nation's housing stock;
- (3) to encourage effective action to prevent childhood lead poisoning by establishing a workable framework for lead-based paint hazard evaluation and reduction and by ending the current confusion over reasonable standards of care;
- (4) to ensure that the existence of lead-based paint hazards is taken into account in the development of Government housing policies and in the sale, rental, and renovation of homes and apartments;
- (5) to mobilize national resources expeditiously, through a partnership among all levels of government and the private sector, to develop the most promising, cost-effective methods for evaluating and reducing lead-based paint hazards;
- (6) to reduce the threat of childhood lead poisoning in housing owned, assisted, or transferred by the Federal Government; and
- (7) to educate the public concerning the hazards and sources of lead-based paint poisoning and steps to reduce and eliminate such hazards.

42 U.S.C.A. § 4851a (West Supp. 1993).

212. ALLIANCE TO END CHILDHOOD LEAD POISONING, *supra* note 210, at 6.

213. The term "target housing" is defined as housing built prior to 1978, except housing for elderly or disabled persons (unless any child less than six years of age resides or is expected to reside in such housing) or any zero-bedroom dwelling. 15 U.S.C. § 2681(17) (Supp. IV 1992). In jurisdictions that banned the sale or use of lead-based paint before 1978, the Secretary of Housing and Urban Development, at his or her discretion, may designate an earlier date. *Id.*

214. The term "residential dwelling" is defined as a single-family dwelling (including attached structures such as porches and stoops) or a single-family dwelling unit in a structure containing more than one separate dwelling unit, and in which each such unit is occupied or used, or intended to be used or occupied, in whole or in part, as the residence or home of one or more persons. *Id.* § 2681(14) (Supp. IV 1992). "Residential real property" is real property on which one or more residential dwellings is used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of one or more persons. *Id.* § 2681(15).

215. The term "lead-based paint" is defined as paint or other surface coatings containing lead in excess of 1.0 mg/cm² or 0.5% by weight; in the case of paint or other surface coatings on target housing, a lower level as established by the Secretary of Housing and Urban Development, defined in § 4822(c) of Title 42; or, in the case of any other paint or surface coatings, such other level as may be established by the Administrator. 15 U.S.C. § 2681(9) (Supp. IV 1992).

closure and warning requirements of section 4852d.²¹⁶ Under section 4852d, the seller or lessor must provide the purchaser or lessee with a lead hazard information pamphlet prescribed by the Administrator of the Environmental Protection Agency;²¹⁷ disclose to the lessee or purchaser the presence of any known lead-based paint or lead-based paint hazards and provide any available lead hazard evaluation report;²¹⁸ and allow the purchaser ten days (unless parties agree to a different time period) to conduct an inspection or risk assessment for the presence of lead-based paint hazards.²¹⁹ These disclosure requirements, which become effective in October 1995,²²⁰ must be met "before the purchaser or lessee is obligated under any contract to purchase or lease the housing."²²¹ Additionally, any misrepresentations made under these federal

216. 42 U.S.C.A. § 4852d (West Supp. 1993).

217. *Id.* § 4852d(a)(1)(A). This pamphlet must (1) contain information on health risks associated with lead exposure; (2) provide information on lead-based paint hazards in target housing; (3) describe the risks of lead exposure for children under six years of age; (4) describe renovation risks in dwellings with lead-based paint hazards; (5) provide information on approved methods to evaluate and reduce lead-based paint hazards; (6) advise persons how to obtain a list of certified lead abatement contractors; (7) state that a risk assessment of or inspection for lead-based paint is recommended prior to purchasing, leasing, or renovating target housing; (8) state that certain state and local laws impose additional requirements regarding lead-based paint in housing and provide a list of federal, state, and local agencies in each state that can provide information about applicable laws and available governmental and private assistance and financing; and (9) provide any other information about environmental hazards associated with residential real property as the Administrator deems appropriate. 15 U.S.C. § 2686(a) (Supp. IV 1992).

218. 42 U.S.C.A. § 4852d(a)(1)(B) (West Supp. 1993). The term "lead-based paint hazard" is defined as "any condition that causes exposure to lead from lead-contaminated dust, lead-contaminated soil, lead-contaminated paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects as established by the Administrator under this subchapter." 15 U.S.C. § 2681(10) (Supp. IV 1992).

219. 42 U.S.C.A. § 4852d(a)(1)(C) (West 1993). The term "risk assessment" is defined as an on-site investigation to determine and report the existence, nature, severity and location of lead-based paint hazards in residential dwellings, including gathering information on the age and history of the housing and occupancy by children under age six; visually inspecting; conducting limited wipe sampling or other environmental sampling; performing any other activity as may be appropriate; and explaining in a report the investigation results. 15 U.S.C. § 2681(16) (Supp. IV 1992). The term "inspection" is defined as "(A) a surface-by-surface investigation to determine the presence of lead-based paint, as provided in section 4822(c) of Title 42, and (B) the provision of a report explaining the results of the investigation." *Id.* § 2681(7).

220. 42 U.S.C.A. § 4852d(d) (West Supp. 1993).

221. *Id.* § 4852d(a)(1). Section 4852d further provides that when a seller or lessor has entered into a contract with an agent for the purpose of selling or leasing a unit of target housing, regulations promulgated under this section require the agent, on behalf of the seller or lessor, to ensure compliance with this section. *Id.* § 4852d(a)(4).

requirements would likely serve as a basis for a state law cause of action in tort.²²²

B. Mandatory Purchase and Sale Contract Lead Warning Statement

In addition to potential liability for failing to make required disclosures, residential sellers and brokers also may be liable for failing to include mandated lead-based paint related warnings in the purchase and sale contract.²²³ According to section 4852d, this lead warning statement must contain the following text printed in large type on a separate sheet of paper attached to the contract:

Every purchaser of any interest in residential real property on which a residential dwelling was built prior to 1978 is notified that such property may present exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems, and impaired memory. Lead poisoning also poses a particular risk to pregnant women. The seller of any interest in residential real property is required to provide the buyer with any information on lead-based paint hazards from risk assessments or inspections in the seller's possession and notify the buyer of any known lead-based paint hazards. A risk assessment or inspection for possible lead-based paint hazards is recommended prior to purchase.²²⁴

The purchase and sale contract also must contain a statement signed by the buyer certifying that the buyer received the lead hazard information pamphlet, read the lead warning statement and understands its contents, and had ten days (unless parties agree on a different time period) before becoming obligated under the contract to conduct a risk assessment or inspection for lead-based paint hazards.²²⁵

Failing to meet the statutory requirements of section 4852d will subject the seller to liability under the Act.²²⁶ Furthermore, if the seller has contracted with a broker for the purpose of selling residential real estate that is subject to section 4852d, the broker will be liable if it fails to ensure that the seller complies with the Act.²²⁷ This duty to ensure compliance is important because anyone who knowingly violates the sec-

222. See *supra* notes 131-209 and accompanying text.

223. 42 U.S.C.A. § 4852d(a)(4), (b)(5) (West Supp. 1993).

224. *Id.* § 4852d(a)(3).

225. *Id.* § 4852d(a)(2).

226. *Id.* § 4852d(b)(5).

227. *Id.* § 4852d(a)(4).

tion's provisions is "jointly and severally liable to the purchaser or lessee in an amount equal to 3 times the amount of damages incurred by such individual."²²⁸ Additionally, the "court may award court costs to the party commencing such action, together with reasonable attorney fees and any expert witness fees, if that party prevails."²²⁹

VI. CONCLUSION

Because lead is ubiquitous in the environment, the risk of childhood lead poisoning is high. In Wisconsin, lead paint is the largest source of lead poisoning primarily due to old housing stock. Because the lead poisoning epidemic is primarily related to the age of housing stock in a particular city, childhood lead poisoning affects the affluent as well as the poor. As plaintiffs' attorneys become more aware of the various causes of action under which they can sue for lead poisoning, the volume of lead poisoning suits in Wisconsin is likely to rise. Furthermore, the severe nature of the injuries caused by lead poisoning will no doubt create substantial awards.

To protect themselves from possible liability, real estate brokers, residential sellers, and landlords should familiarize themselves with lead paint problems and assess their properties for potential lead-based paint hazards. Any existing hazards should be disclosed and remedied as soon as possible. Although lead abatement is not inexpensive, potential harm is exponentially more costly, both in terms of damage awards and injured children.

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228. *Id.* § 4852d(b)(3).

229. *Id.* § 4852d(b)(4).

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